Chapter 10:   CRL Installation

This chapter describes how to install **CRL**. **CRL** is available from the
Fermilab UPS kits area, both for Linux[1] and for Windows. It is also installed in
the Fermilab AFS area for both Linux and Windows under
`/afs/fnal.gov/ups/crl_products/`. At the time of this writing
(May 2003), the current version of **CRL** for Windows and Linux is 1_7_07.

Note for Linux Users:

As of version V1_7_05, the product structure of **CRL** for Linux has been
changed to allow separate versioning of the component pieces. The **UPS**
product structure now contains the umbrella product **crl_products** which has
as its dependent products: **crl_logbook**, **crl_process_logger**, and
crl_web_interface. Each of the separate pieces can be installed and used
independently. Typically you'd install the parent product, **crl_products**,
which includes all three.

The Windows release is still packaged as a single product.

10.1 Requirements

We recommend that you have at least 128 Mb of RAM on the machine (256 is
better), and a "good" graphics card (lots of memory and high-end graphics
capability). For Linux installations we recommend the **KDE** window manager
over **FVWM**, although either will work.

Refer to the product web pages for information on the disk space required
(`http://www-cpd.fnal.gov/CRL/`). The space required may go up or
down as versions change. Be aware that the application loads dynamically.
You may need additional space to configure the application, since extra objects
take extra space.

For the logbook entry database, you need to install a relational database
management system (RDBMS). The database can reside on a different
computer, if desired. Requirements may vary; a **MySQL** installation initially

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1. Solaris can be made available upon request.

requires about 25 Mb. The database itself grows as you add entry pointers.
Each entry pointer adds about 0.5 kb. The entries themselves require varying
amounts of space; figure on about 1 to 3 kb for a text entry.

10.2 Software Requirements

10.2.1 Requirements for Installing CRL

Linux (via **UPD**)	**UPS** and **UPD** must be installed on target machine (for instructions, start at the **UPS/UPD** product documentation home page `http://www.fnal.gov/docs/products/ups /ReferenceManual/index.html`, and look under "Product Installers").
Linux (jar file)	none
Windows (jar file)	none

10.2.2 Requirements for Running CRL

We list the requirements for each of the three portions separately. To run all
portions of the product, make sure you have the items in all the lists (recall that
for Windows, the portions are not available separately).

Logbook Only

- Java 1.4.1 (this comes bundled with the **crl_logbook** UPS product; you
  will need to download it separately unless you use UPD to install the
  product) Note that this program will not interfere or conflict with any
  pre-existing installation of Java on your system.
- MySQL database or other RDBMS (MySQL is available for download at
  `http://www.mysql.com/downloads/index.html`. It is also
  available in KITS; start from `ftp://ftp.fnal.gov/products/`.)
- The **crl_products** or **crl_logbook** UPS product. Download the jar file
  from `http://www-cpd.fnal.gov/CRL/downloads.htm`, or get
  either product from KITS starting at
  `ftp://ftp.fnal.gov/products/`.

CRL Web Access Only

- a web server (e.g., Apache Web Server, available for download from `http://httpd.apache.org`)
- Tomcat (download latest version from `http://jakarta.apache.org`)
- mod_jk Apache-to-Tomcat plugin[1]
- The **crl_products** or **crl_web_interface** UPS product. Get either product from KITS starting at `ftp://ftp.fnal.gov/products/`.

All the above items are available for download from `http://www-cpd.fnal.gov/CRL/installation.htm`.

Installation instructions for the web server components can be found at `http://www-cpd.fnal.gov/CRL/Apache.html`, `http://www-cpd.fnal.gov/CRL/Tomcat.html`, and `http://www-cpd.fnal.gov/CRL/Tomcat_Apache_Plugin.html`, respectively.

CRL Process Logger Only

You need only the **crl_products** or **crl_process_logger** UPS product. Get either product from KITS starting at `ftp://ftp.fnal.gov/products/`.

10.3 Upgrade Instructions

In order to upgrade, copy over the new **CRL** application jar file to replace the old one. Go either to the web page `http://www-cpd.fnal.gov/CRL/downloads.htm` or copy straight from kits via `ftp://fnkits.fnal.gov/products/` or from afs space (`/afs/fnal.gov/ups/<product_name>/<version>/<OS>/crl_app.jar`, e.g., `/afs/fnal.gov/ups/crl_logbook/V1_7_07/Linux/crl_app.jar`). Check the Release Notes for properties you may need to add to or change in your `LogbookConfigParms.properties` file.

If you're upgrading from a version prior to V1_7_04 and if you don't do a complete reinstall of **CRL**, you'll need to upgrade your JVM (JRE or JDK) to version 1.4.1 on your own. Once you do that, you can make the necessary changes to JVM 1.4.1 so that it works with the latest **CRL**. Follow the

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1. mod_jk provides support for Dynamic Shared Object (DSO); it tells Apache to send JSPs to Tomcat.

instructions in section 11.2 *Configuring CRL to Use a Preinstalled JVM (Optional)*. Also see
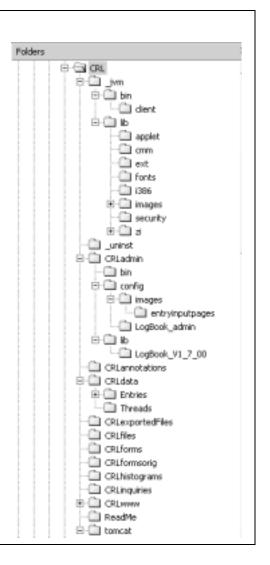`http://www-cpd.fnal.gov/CRL/installation.html.`

10.4 Installing CRL on Windows

The only Windows platform on which **CRL** has been tested is Windows 2000.

To install **CRL**, go to `http://www-cpd.fnal.gov/CRL/downloadwindows.html`, choose the latest version, read the README and Release Notes files, then double-click on the executable link and save the `.exe` file to your computer. Once it's on your disk, double-click on this file to run it. This installs the application. After the installation is complete, verify the directory contents against the listing shown here.

Before you run the program, you must edit the `LogbookConfigParms.properties` file so that it points to your database. See section 11.1 *Editing the Properties File* and Chapter 15: *CRL's Java Properties* for details.

Folders

```
CRL
  _jvm
    bin
      client
    lib
      applet
      cmm
      ext
      fonts
      i386
      images
      security
      zi
  _uninst
  CRLadmin
    bin
    config
      images
        entryinputpages
      LogBook_admin
    lib
      LogBook_V1_7_00
  CRLannotations
  CRLdata
    Entries
    Threads
  CRLexportedFiles
  CRLfiles
  CRLforms
  CRLformsorig
  CRLhistograms
  CRLinquiries
  CRLwww
  ReadMe
  tomcat
```

10.5 Installing CRL on Linux

For installing on Linux, you need to log in as *root* only if you plan to install in an area requiring *root* privileges, e.g., `/opt`, `/usr/local`, etc. Otherwise you can perform the installation under another account. Create a target directory for **CRL** before installing it.

10.5.1 Install from Jar File

If you do not have a **UPS** product environment on your Linux machine, you can download the latest **crl_logbook** and/or **crl_process_logger** and/or **crl_web_interface** product jar file(s) from one of two locations:

- the **CRL** web site
  (`http://www-cpd.fnal.gov/CRL/downloads.htm`)
- `ftp://ftp.fnal.gov/products/crl_logbook/v1_7_07/Linux/` or
  `/afs/fnal.gov/ups/crl_logbook/v1_7_<x>/Linux` (and similarly for **crl_process_logger** and **crl_web_interface**)

Install by hand, according to the directions provided in the README file on the web site.

10.5.2 Install using UPD

If you are running UPS on your Linux machine, install the **crl_products** v1_7_<x> product from KITS via UPD. From the web, start from `ftp://ftp.fnal.gov/products/crl_products/`. Follow the instructions in the README file (on the web under `http://www-cpd.fnal.gov/CRL/downloadlinux.html`).

10.6 Preparing to Use CRL in Fermilab's AFS Products Area

10.6.1 Instructions

CRL is installed under `/afs/fnal.gov/ups/crl/` for Linux and Windows, and may be used from there with appropriate setup on your local machine. Instructions are provided at `http://www-cpd.fnal.gov/CRL/afs.html`. In addition, README files are provided with the product installed in the AFS product area.

Here is a checklist of the things to do:

1) Make sure AFS is installed on your local machine.

2) Create a MySQL database, if necessary (see `http://www-cpd.fnal.gov/CRL/LinuxInstallExample.htm`).

3) Copy the following files from the **CRL** product area in AFS space to your local machine (we recommend creating a similar directory hierarchy):

   · Copy the **CRL** invocation script (`afs/fnal.gov/ups/crl_logbook/v<x_y>/Linux/crl` for Linux; `afs/fnal.gov/ups/crl_logbook/v<x_y>/Windows/crlWin32.bat` for Windows) to a local directory with read-execute permissions.

   · Copy all files under the `LogBook_admin` directory to a local directory that's directly under your local "top" directory, and that's write-protected.

   · Copy any desired files under the `images` directory (includes images not in the jar file) to a local directory that's write-protected.

   · Copy any desired `.winq` files under the `CRLinquiries` directory to a local directory that's write-protected.

   · Copy any desired xml files under the `CRLforms` directory to a local directory that's write-protected.

   · Copy any desired files from the `CRLfiles`, `CRLmaillists`, `CRLannotations`, and `CRLexportedFiles` directories; at least create analogous local directories to house appropriate files.

4) Edit the **CRL** invocation script (see notes below for Linux and Windows specifics).

5) Edit your local copy of the properties file
   (`/local/path/to/crl_top_directory/LogBook_admin/LogbookConfigParms.properties`) so that it works with your
   database, etc. See section 11.1 *Editing the Properties File*.

6) Edit `LogBookConfig.xml` to use images in the local `images`
   directory, as necessary
   (`/local/path/to/crl_top_directory/LogBook_admin/LogBookConfig.xml`).

7) Complete other customization as desired. See section 11.4 *Configuring Your Desktop*.

10.6.2 Note for Linux

There is no icon supplied for start-up of the application. You will need to edit
the `crl` script in order to specify the database and a local "top" directory (the
directory directly above the `LogBook_admin` directory). The script uses
environment variables.

Communicate to your users where you've put the local **CRL** invocation script
and what you've called it!

10.6.3 Notes for Windows

An icon is supplied for start-up of the application.

The `crlWin32.bat` script is set by default to look for the "top" directory
(the one above `LogBook_admin`) in the same directory where the script
itself is located. If your configuration is different, edit the script to set the
location of the "top" directory. Also in the script, set the drive letter that points
to the **CRL** executable.

10.6.4 Linux and Windows Combined Setup

To set up a configuration that can be used from Linux or Windows, set up areas
for each OS separately, but maintain only one copy of all unique files. Use
symbolic links where necessary to avoid duplicate files. Note that you must
maintain separate copies of the properties file because paths are written
differently in the two operating systems.

10.7 Uninstalling CRL

10.7.1 Uninstall on Windows

Navigate to the top directory where you installed **CRL** on your system, and remove all files.[1]

10.7.2 Uninstall on Linux

UPD Installs

For UPD installs, use the `ups undeclare -y` command to remove the product (see section 11.5.1 of the UPS/UPD manual at `http://www.fnal.gov/docs/products/ups/ReferenceManual/html/maintdb.html#16198`). E.g.,:

```
% ups undeclare [-f <flavor>] -y crl v<x_y>
```

Jar File Installs

For **CRL** jar file installs, just remove all the **CRL** files, e.g.,:

```
% rm -r /path/to/crl/version
```

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1. Ignore the uninstall.jar file that you may see; it works only with InstallShield and we no longer support that.